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a plate;

a substrate on the plate comprising a plurality of contacts configured to electrically contact the pads;

[make an electrical connection with the die;]

a clamping mechanism attached to the plate configured to bias the [die against the substrate] contacts and the pads together with a force;

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the plate, the substrate and the mechanism configured such that the die can be placed on the substrate, the mechanism attached to the plate, and the die retained [by] between the mechanism [on the plate] and the substrate with the contacts in electrical contact with the [substrate] pads; and

[a contact on the substrate configured to electrically contact the pad on the die, the]

each contact comprising a [surface] bump and a plurality of spaced raised portions projecting from the [surface] bump, the raised portions dimensioned to penetrate into [the] a pad at the force to a penetration depth equal to a height of the raised portions but less than a thickness of the pad, the [surface] bump dimensioned to limit further penetration of the raised portions into the pad at the force.

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79. (five times amended) The apparatus of claim 78 wherein the [surface] bump is dimensioned to penetrate into the pad at a second force which is about two to ten times the force.

80. (five times amended) The apparatus of claim 78 further comprising a plurality of conductive traces on the substrate in electrical communication with the contacts, and [an] a plurality of external contacts on the plate in electrical communication with the traces.

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81. (five times amended) The apparatus of claim 78 wherein the [raised portions have a] height [with respect to the surface of] is about 5000A.

82. (five times amended) The apparatus of claim 78 wherein the pads comprises [a] bondpads.

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87. (four times amended) [A test] An apparatus for testing a semiconductor die having a plurality of pads comprising:

a plate comprising a plurality of external leads;

a substrate on the plate comprising a plurality of contacts configured to electrically contact the pads;

[make electrical connections with the die;]

a clamping mechanism attached to the plate configured to bias the [die against the substrate] contacts and the pads together with a force;

the plate, the substrate and the mechanism configured such that the die can be placed on the substrate, the mechanism attached to the plate, and the die retained [by] between the mechanism [on the plate] and the substrate with the contacts in electrical contact with the [substrate] pads;

[a plurality of contacts on the substrate configured to electrically contact the pads, the]

each contact[s] comprising a bump [surfaces] and a plurality of spaced raised portions projecting from the [surfaces] bump with a height, the raised portions configured to penetrate into [the] a pad[s] with a penetration depth equal to the height but less than a thickness of the pad[s] while the [surfaces] bump limits further penetration, the force selected to be greater than a first force at which the raised portions penetrate the pad[s] but less than a second force at which the [surfaces] bump penetrate the pad[s], the second force being from two to ten times the first force; and

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a plurality of conductive traces on the substrate in electrical communication with the contacts and with the external leads.

88. (four times amended) The apparatus of claim 87 wherein the height [of the raised portions] is at least 5000Å.

90. (four times amended) The apparatus of claim 87 wherein the bump comprises a surface and the raised portions project from the surface.

[second force is about two times the first force.]

91. (four times amended) The apparatus of claim 87 further comprising a plurality of bond pads on the conductive traces.

92. (four times amended) [A test] An apparatus for testing a semiconductor die having a plurality of pads comprising:

a plate;

[comprising a plurality of external leads;]

a substrate on the plate comprising a plurality of contacts configured to electrically contact the pads;

[make electrical connections with the die;]

a clamping mechanism attached to the plate configured to bias the [die and the substrate] contacts and the pads together with a force;

the plate, the substrate and the mechanism configured such that the die can be placed on the substrate, the mechanism attached to the plate, and the die retained [by] between the mechanism [on the plate] and the substrate with the contacts in electrical contact with the [substrate] pads;

[a plurality of contacts on the substrate configured to electrically contact the pads, the contacts including]